



IDEM's Surface Water Quality Assessment Program

Trace Metals Sampling Program

Program Objective

To comply with the new dissolved metals water quality criteria, data on trace amounts of metals in streams are required to accurately assess surface water quality. Historically, only total recoverable metals have been monitored. Therefore, there is a need in the Assessment Branch to implement Clean Sampling Techniques (Method 1669) in conjunction with ultra-clean, low detection levels for metals (EPA Method 1638, 1636, 1631, 1630, and others). The main objective of this project is to gather trace metals data for both dissolved and total recoverable metals at nanogram levels (parts per trillion, ppt) using clean sampling and ultra-clean analytical techniques. Additionally, the study has been used to investigate sampling methods that require less vigorous techniques in order to allow trace metals sampling to be conducted during routine sampling programs.

Program Participants

This program will be operated through the sampling efforts of the Surveys Section of the Assessment Branch, and through support of the selected Contract Analytical Laboratory.

Program Description

Media:	Surface water (rivers and streams)
Study Area:	Statewide targeted sampling locations
Sampling Sites:	24 locations
Sampling Frequency:	Samples will be collected quarterly
Data Collected:	18 metals, 13 non-metals, field data

Program Products

- Develop expertise in using Clean Sampling Methods.
- Collect both Total and Dissolved Metals data statewide at nanogram levels (parts per trillion, ppt).
- Identify dissolved and total mercury and methyl mercury concentrations.
- Sampling & Analysis Work Plans.
- QA/QC Review Reports.

Technical Notes

Select rivers and streams throughout Indiana were strategically chosen for participation in this program. Sampling sites were selected for close proximity to a USGS gaging station to facilitate detailed flow monitoring in conjunction with the metals sampling. Samples are taken quarterly in order to capture metals concentrations during the four seasons of the year. Both total and dissolved metals concentrations will be measured in surface water samples.

Contact Information

Tim Beckman, Environmental Manager
Indiana Department of Environmental Management
Office of Water Quality – Assessment Branch
Surveys Section
100 North Senate Avenue
MC65-40-2 Shadeland
Indianapolis, IN 46204-2251
Phone: (317) 308-3195
Fax: (317) 308-3219
Email: tbeckman@idem.IN.gov

<p>IDEM Information: (317) 232-8603 or 800-451-6027 800-743-3333(TDD) toll-free for Indiana residents www.IN.gov/idem/water/</p> <p>Report Environmental Emergencies: (888) 233-7745</p> <p>Confidential Technical Assistance: (800) 988-7901</p> <p>Pollution Complaint: www.IN.gov/idem/pollutioncomplaints/</p> <p>Questions and Comments: www.IN.gov/idem/contact/questions.html</p>	<p><u>For More Information on IDEM's Office of Water Quality...</u></p> <p>Assessment Branch (Surface water quality monitoring: rivers and streams, lakes, water quality standards) Shadeland Office, Indianapolis (317) 308-3173</p> <p>Compliance Branch (Compliance and inspections, data and information services, wastewater certification and continuing education) Indiana Government Center North, Indianapolis (317) 233-2545</p> <p>Drinking Water Branch (Public water supply supervision and ground water protection) Shadeland Office, Indianapolis (317) 308-3308</p> <p>Permitting Branch (Facilities Construction & Engineering Support, Industrial & municipal permits, modeling, and wet weather) Indiana Government Center North, Indianapolis (317) 232-8760</p> <p>Watershed Planning Branch (Rules development, wetlands, TMDL, watershed management) Indiana Government Center North, Indianapolis (317) 233-8488</p>
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